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THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

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AROUND THE LAKES.

CLEVELAND.

Hon. Wiley M. Eagan, of Chicago, was in the city yesterday.

The tugs James Amadeus and Ida Sims are doing some boiler work, made necessary by recent tests of their boilers.

The tug W. D. Cushing has been sold by order of the court for $4,850, Palmer & Benham being the nominal purchasers.

The official number of the steamer Wiley M. Eagan is 81,143, her tonnage 1677.48 gross, and her home port Milwaukee.

The new steamer Horace A. Tuttle was surveyed and rated Tuesday at Barnhisel's dock by insurance agents W. B. Scott and A. R. Manning.

Captain George Berriman, this week, received a draft from W. M. Eagan for $100,000, part payment for the steamer sold to Eagan, Vance and others.

The lighthouse board has issued a new list of the lights of the northern lakes and rivers, as also those in Canadian waters, corrected up to the opening of navigation.

Captain Russell, of the schooner Sumatra, advises Captain George McKay that the ice at Marquette will waste away sufficiently to let vessels out to-day or by Saturday at the latest.

G. C. Barnes will put the Ætna shaking grate into all the new steamers building at this port. This grate is one of the really good things for the steamboat, and we do not hesitate to recommend it.

Vessel transactions recorded during the week are the tug Tom Maytham, one-third, Wm. Kennedy to Collier & Logie, for $1,800 and tug Chas. Castle, one-third, W. A. Collier to Wm. Kennedy for $1,200.

The schooner St. Lawrence, Captain Doville, has received a thorough overhauling and repairs at the head of the old river bed, consisting of all new keelsons, new stanchions, recalking and refastening.

Mr. Charles Barron, for several seasons past chief engineer of the favorite excursion steamer Pearl, has resigned to accept the same position on the steamer City of Milwaukee, plying between Milwaukee and Grand Haven.

Michael Mullen, agent and dealer in Youghiegheny and Massillon coal, has gone into the coal business in the old central tug office, Perkins block, near East Main street bridge, where he will be found ready to coal steamers day and night.

The appointments for the Smith tug line have been made and are as follows: Patrick Henry, Captain George Stephens; L. P. Smith, Captain Del Moffatt; James Amadeus, Captain William Dwyer; S. S. Stone, Captain S. T. Dwyer; N. P. Gates, Captain John Brown.

The Chase fog whistle was tested last Saturday and worked admirably. Every one who is obliged to endure its musical noise can not but enjoy the regularity with which it blows the whistle. One of these machines has been placed on the Kasota, Tower, Wallula, Outhwaite, Fay, Henry Chisholm, D. P. Rhodes and Sheffield.

Moore & Bartow's new steamer Robert Rhodes will probably be launched on Tuesday, May 3, at Quayle's Sons' yard. She is counterpart of the Samuel Mather and both will make good records during the coming years, as they are classed with the best tonnage on the lakes. The dimensions of the Robert Rhodes are: Over all 258 feet, keel 245 feet, beam 40 feet, depth 20 feet.

Extensive improvements have been made to the steamer City of Detroit, Captain McLaughlin, at a cost of about $30,000 to $35,000. Principal among them are the remodeling of the cabin somewhat like that of the City of Cleveland, and putting in feathering wheels. This has increased her speed so that she will be able to make as good time between this port and Detroit as the City of Cleveland. She arrived here Monday for the first time this season, looking well. The company has established a ticket office on Bank street, which is in charge of the genial ticket agent Mr. Jackson, and is a convenience both to the traveling public and the company.

At the Cleveland Drydock the tug Paige had her iron rudder replaced by a wooden one, and shaft straightened. Her machinery was overhauled by the Globe Iron Works Co. The scow J. U. Porter had her bottom calked. The tug Cushing was in for a new Trout wheel. During the winter the Cushing had her engines enlarged to 20½ by 22 inch. The Tempest was in dock for a new shoe and to have her shaft straightened.

Three of Captain Thos. Wilson's fleet were the first arrivals at Chicago from the lower lakes, the Wallula, Captain Wm. Carlisle, Engineer Robert McCutcheon, on one side of the Rush street bridge, and the Charlemagne Tower, Captain N. S. Murphy, Engineer George Averill, on the other side, at 7:30 Tuesday evening. At 8:30 the Kasota, Captain A. E. White, Engineer Charles Rice, which had the honor of being the first up boat through the straits, steamed up the river, followed an hour later by the steamer James Pickands.

The circulars issued by the railroad companies inviting every one to give views and plans on the prevention of loss of life on railroads by fire have not only prompted a theory from the "Second Engineer," but Mead & Thomson are striving to show that the thing can be done. A personal inspection of their mechanism of heating cars must convince any one that they are on the right road. These gentlemen can heat cars or steamboats by a very simple device, one that will not be expensive, will not scald passengers instead of burning them, and which can be applied in an instant and detached as quickly. If we live the natural span of life it is short, and anything of this kind that will prevent death by painful accident should be adopted. A test of this principle will be made in the rooms over John Thomson's shop next week, and due notice will be given to all interested so that they may be present.

Meteorological summary for the week ending April 27:

Mean barometer	29 859
Mean temperature,	47.4
Mean humidity	69.8
Total precipitation, inch,	.31
Prevailing direction of wind.	South.
Total wind movement	1843
Av. cloudiness	7.2
Av. state of weather	Fair.
Max. temperature, highest	66.0
Min temperature, lowest	33.5

WILLIAM LINE, Sergt. Signal Corps, U. S. A.

SAND BEACH.

Special to the Marine Record

Navigation on Lake Huron may be said t be thoroughly open now. The propeller Atlantic, which left Detroit Monday, April 11, came up the lake without much trouble Wednesday, and after about two hours' work, pushed her way into the dock, and, after a short stay, proceeded on her way up the lake, but stuck in the ice in Thunder Bay for several days.

Several steambarges, with tows, have passed up. The first tows to take refuge in the harbor were the Yosemite and one, and Westford and three.

A force of men are engaged in fitting out the government boats for the season's campaign, and it is expected that work will begin about the first of May.

The tugs Angler and Fishermen are fishing from this port. Last Saturday while out on Saginaw Bay lifting nets, in the heavy gale, the Fishermen lost her rudder and was totally disabled. The Angler towed her into port, but parted nearly all her lines while doing so.

The life saving station went into commission the 15th. Keeper, D. E. Dues;' surfmen, Charles Lebow, James McCash, Ed Prescott, Ben Teno, Eugene Brown, Albert Brown, John E. Tucker, Hugh Reynolds.

LUFF.

SOUTH HAVEN.

The tug Jennie King, which parted from the propeller A. B. Taylor, Saturday, was sighted eight miles off this port. The Taylor, which was lying here weather-bound, brought her in. The two men aboard had a rough experience, having been thirty six hours without food.

CHICAGO.

Special to the Marine Record.

The shipchandlers, sail makers, and vessel supply storekeepers have been having a busy time fitting out and providing for the large grain fleet which is this week leaving this port for the lower lakes, and O. S. Richardson & Co., and other coal merchants have been kept hard at it, night and day, coaling up the steam vessels prior to their leaving.

A collision occurred as the Wallula was coming up the river, with the schooner Cape Horn, going down, near the Illinois Central railroad bridge. The tug J. C. Ingram, towing the Cape Horn, tried to pass between the Wallula and the barge Stephenson, lying at a dock. The Wallula struck the Cape Horn amidships, carrying away some of her rail and stanchions, and the Cape Horn carried away the Stephenson's mizzen rigging and her own head gear and martingale.

Captain M. A. Gunderson's schooner Racine is getting new ceiling and timbers aft, new hatch combings, recalking and painting.

The T. W. Harvey line will be commanded as follows: Schooner Delos de Wolf, Captain A. J. Brown; schooner H. H. Badger, Captain John Bailey; schooner Adirondac, Captain Robert Blackburn; steambarge St. Joseph, Captain John Conley; engineer, James McGuirk. The H. H. Badger has received new ceiling and plank sheer, decks calked, and a general overhauling, the Delos de Wolf and Adirondac a thorough overhauling, and all have received new coats of paint. The St. Joseph is at Manitowoc., receiving a thorough rebuild.

The tug Uncle Sam is receiving new stanchions, bulwarks, rail, wearing piece, and general repairs; the tug Flossie Thielcke new decks and ceiling, new lower fender strake and general repairs.

The propeller J. C. Perret, Captain Thos. Chron, was in one of the Chicago Drydock Co.s' docks Tuesday, having her bottom calked and stern bearing fixed. She looks elegantly in her new dress coat of paint. She left Wednesday for Menominee with barges Witbeck, Wm. Grandy, and Empire State, and will call at Manitowoc on her way down for the barges D. L. Filer and F. S. Robinson, which have been rebuilt at that port during the winter months.

The first of the lower lake fleet to reach Chicago was the steamer Wallula. She arrived at 7 o'clock Monday evening and was followed by the steamers Charlemagne Tower, Kasota, James Pickands. After steaming through the Straits they encountered but little drift ice although the wind was blowing hard from the west. They had a quick run up Lake Michigan. Masters of the steamers think vessels will have no further trouble in passing through the Straits. The first of the grain fleet that left were the Nipigon, Wayne, Melbourne, Vernon, Red White and Blue, C. C. Barnes, F. M. Knapp, D. Ballentine, Northwest, L. A. Law, James Mowatt, Mediator, Lake Forest, Charles Luling, E. B. Hale, John Martin, Sandusky, John B. Lyon, J. M. Hutchinson, J. F. Eddy, T. W. Palmer, Escanaba, Josephine, Rhoda Emily, B. W. Blanchard, Iron City, S. M. Stephenson, N. K. Fairbanks.

At Miller Bros.' shipyard the sloop yacht Frolic was in dock for a new center board box; the barge Butcher Boy to have a leak stopped; the canal boat Ellen C'Connell for some new plank forward; the schooner Imperial to have her bottom calked; tug Wm. Rollar for a new wheel; tug Kitty O'Neil and schooner Lone Star to have leak stopped; tug Union for repairs to her shoe and rudder; the schooner Trowbridge received a new jibboom; the schooner I. M. Forest a new topmast, the schooner Rockaway a new foremast.

WILLIAMS.

BUFFALO.

Special to the Marine Record.

Business is brisk at the drydocks. There are at the Union dock the steambarge City of Cleveland, and schooners Adams and Annie Voght. At the Mills' docks are the propeller Commodore and steambarge Oregon. The former will be ready to come out in a week, but the latter will be in two weeks. Her iron arches are in.

A report has reached us from Detroit that some of the winter-storage cargoes are affected with weevil, and that many of the Buffalo elevators will refuse to receive said cargoes, but it is thought that those which are badly affected will be discharged at Detroit before they leave, for examination and then reshipped if the condition be not too bad.

Captain Thos. Wilson, of Cleveland, was in town Tuesday on business. He is one of the arbitrators in the case of the H. J. Jewett and the Anchor line boat, for assistance last fall when the Jewett lost her rudder on Lake Michigan. He returned to Cleveland without action in the case, which has been postponed for the present.

The shipments of hard coal have been more lively this week. Shippers appear to have taken a different view of the inter-state law, and are taking all the tonnage that is offered at the opening rates, 75c.

Canal freights are stiff at 6c; boatmen are asking more.

The new steamer building at Mills' yard is to be named the Lackawanna, and will be commanded by Captain Peter Kenny, late of the Colorado. She will be launched next week. She is fine.

WM.

The propeller Lansing and four-masted schooner Wadena, the latter in tow of the Spokane, arrived on Saturday, all with heavy grain cargoes.

The schooner Typo, which came in about 1 o'clock Sunday from Detroit, has the honor of being the first to arrive under sail.

Captain Crosthwait, has chartered the Isaac May tow for the season. The May and Muskoka are now at Chicago. They will probably run in the Canadian cedar trade.

The Express says coal shippers look ruetully on as the early fleet nears Chicago before May 1st. All coal that is in stock there on that date must stand a city tax of fully 20 cents a ton. It was not thought that the fleet would get there in time to be assessed when it was loaded.

Captain J. J. Rardon, of Crosby & Rardon, Chicago, vessel brokers, is in Buffalo preparing to move to the former city. He states that the outside insurance companies are doing a large business and are quite as well equipped for it as the pool companies.

The propeller Oneida was sold by Lorenzo Dimick to John Maxwell of Washburn for $25.000, and it is understood that the same buyer takes the barge R. J. Carney of Captain James Davidson for $8,000. The two will be put together in the lumber trade. Captain Sam Thornton will sail the Oneida.

BAY CITY.

Lumber freights have been fixed by the charter of the barge Ketchum, to load lumber at Sage & Company's docks for the Export Lumber Company at Buffalo. The rate is $2.50 per thousand, the amount that vessel owners have demanded and which they deem just and equitable, considering the condition of grain, ore, and coal freights. The rate of freight from Saginaw River ports, on the basis of this charter, are as follows: Bay City to Buffalo, $2.50; Bay City to Tonawanda, 2.50; Bay City to Ohio ports, 2.00; Saginaw to Buffalo, 2.75; Saginaw to Ohio ports, 2.25.

Captain Mitchell has sold the tug Music to Loudon and others of East Saginaw. She will tow the barges G. W. Davis, W. L. Peck, and Commodore in the lumber trade.

It is said the interstate commerce law has stopped the shipping of salt by rail from the Saginaw Valley to Chicago. It will have to be carried by boat. The Michigan Central road alone has hauled about 1,000,000 barrels a year.

NAVIGATION LAWS OF THE UNITED STATES.

Sec. 4137. Registers for vessels owned by any incorporated company may be issued in the name of the president or secretary of such company; and such register shall not be vacated or affected by sales of any shares of stock in such company.

Sec. 4138. Upon the death, removal, or resignation of such president or secretary of any incorporation company owning any vessel, a new register shall be taken out for such vessel.

Sec. 4139.* Previously to granting a register for any vessel, owned by any company, the president or secretary thereof shall swear to the ownership of the vessel, by such company, without designating the names of the persons composing the company; and the oath shall be deemed sufficient, without requiring the oath of any other person interested or concerned in such vessel.

Sec. 4140. The secretary of the treasury may make such regulations as he may deem expedient, for the nationalization of all vessels owned by actual residents of the territory of Alaska, on the twentieth day of June, eighteen hundred and and sixty-seven, and which continued to be so owned up to the date of such nationalization.

Sec. 4141. Every vessel, except as is hereinafter provided, shall be registered by the collector of that collection district which includes the port to which such vessels shall belong at the time of her registry; which port shall be deemed to be that at or nearest to which the owner, if there be but one, or, if more than one, the husband or acting and managing owner of such vessel, usually resides.

Sec. 4142. In order to the registry of any vessel, an oath shall be taken and subscribed by the owner, or by one of the owners thereof, before the officer authorized to make such registry, declaring, according to the best of the knowledge and belief of the persons so swearing, the name of such vessel, her burden, the place where she was built if built within the United States, and the year in which she was built; or that she has been captured in war specifying the time, by a citizen of the United States, and lawfully condemned as prize, producing a copy of the sentence of condemnation, authenticated in the usual forms; or that she had been adjudged to be forfeited for a breach of the laws of the United States, producing a like copy of the adjudication of forfeiture; and declaring his name and place of abode, and if he be the sole owner of the vessel, that such is the case; or if there be another owner, that there is such other owner, specifying his name and place of abode, and that he is a citizen of the United States, and specifying the proportion belonging to each owner; and where an owner resides in a foreign country, in the capacity of a consul of the United States, or as an agent for and a partner in a house or copartnership consisting of citizens of the United States, actually carrying on trade within the United States that such is the case, that the person so swearing is a citizen of the United States, and that there is no subject or citizen of any foreign prince or states, directly or indirectly, by way of trust, confidence, or otherwise, interested in such vessel, or in the profits or issues thereof; and that the master thereof is a citizen, naming the master, and stating the means whereby or manner in which he is a citizen.

Sec. 4143. If any of the matters of fact alleged in the oath taken by an owner to obtain the registry of any vessel, which within the knowledge of the party so swearing are not true, there shall be a forfeiture of the vessel, together with her tackle, apparel, and furniture in respect to which the oath shall have been made, or of the value thereof, to be recovered, with the costs of suit, of the person by whom the oath was made.

Sec. 4144. If the master of a vessel is within the district where a registry thereof is to be made, when application is made for registering the same, he shall himself, instead of the owner, or of the agent or attorney, as hereinafter mentioned, make oath touching his being a citizen, and the means whereby or manner in which he is a citizen; in which case, if the master shall knowingly swear to anything untrue, no forfeiture of the vessel on account of such false oath, shall be incurred, but the master shall be liable to a penalty of one thousand dollars.

Sec. 4145. Previous to the registry of any vessel, the husband or acting and managing owner, together with the master thereof, and one or more sureties, to the satisfaction of the collector of the district to whose duty is to make such registry, shall give bond to the United States, if such vessel be of burden not exceeding fifty tons, in the sum of four hundred dollars; if of burden above fifty tons, and not exceeding one hundred, in the sum of eight hundred dollars; if of burden above one hundred tons, and not exceeding two hundred, in the sum of twelve hundred dollars; if of burden above two hundred tons, and not exceeding three hundred tons, in the sum of two thousand dollars.

Sec. 4146. The conditions of the bond given to obtain the registry of a vessel shall in each case be that the certificate of such registry shall be solely used for the vessel for which it is granted, and shall not be sold, lent, or otherwise disposed of, to any person whomsoever; and that in case such vessel shall be lost, or taken by an enemy, burned or broken up, or shall be otherwise prevented from returning to the port to which she may belong, the certificate, if preserved, shall be delivered up, within eight days after the arrival of the master or person having the charge or command of such vessel, within any district of the United States, to the collector of such district; and that is any foreigner, or any person for the use and benefit of such foreigner, shall purchase or otherwise become entitled to the whole or any part or share of or interest in such vessel, the same being within a district of the United States, the certificate shall, in such case, within seven days after such purchase, change, or transfer of property, be delivered up to the collector of the district; and that if any such purchase, change transfer of property, shall happen when such vessel shall be at any foreign port or place, or at sea, then the master or person having the charge or command thereof, shall, within eight day after his arrival within any district of the United States, deliver up the certificate to the collector of such district.

Sec. 4147.* In order to the registry of any vessel built within the United States, it shall be necessary to produce a certificate, under the hand of the principal or master carpenter, by whom or under whose direction the vessel has been built, testifying that she was built by him or under his direction, and specifying the place where, the time when, and the person for whom, describing her build, number of decks and masts, length, breadth, depth tonnage, and such other circumstances as are usually descriptive of the identity of a vessel; which certificate shall be sufficient to authorize the removal of a new vessel from the district she may be built to another district in the same or an adjoining state, where the owner actually resides, provided it be with ballast only.

* Documents for vessels owned by an incorporated company may be issued in the name of the president or secretary, but upon the change of such officer for any cause such vessels must be redocumented. Sales of shares of stock do not affect the registry of vessels in the name of a corporation as owner, even though made to foreigners.

† Carpenter's certificate: The carpenter's certificate should be authenticated by some officer having a seal, if the signature of the carpenter be unknown at the custom house.

THE SAULT LOCKS.

A number of gentlemen, composed of representatives of the Lake Carriers' Association and the Duluth chamber of commerce, called upon General O. M. Poe, of the United States Army, in Detroit, on last week, for the purpose of stating their apprehensions concerning the new locks at the Sault ste Marie, of which he has charge. Among the visitors was Captain Thomas Wilson, of Cleveland.

"What we are particularly afraid of," said Captain McDougall, of Duluth, speaking for the entire party, "is that some accident will occur which will prevent the remaining old locks from transacting the immense business demanding attention during the construction of the new. The question arose in our minds whether it might not have been safer to have left all the old locks in running order, changing the location of the new a trifle to accommodate such an arrangement. In case an accident happened, and the remaining locks could not handle the business, the result would be extremely disastrous. We have come to you in an informal manner to be assured and enlightened upon this point."

"The danger of the old locks becoming disabled is really very small," replied General Poe. "We are very much cramped for room. It is an utter impossibility to go farther south. The two old locks have been in use for upwards of thirty years. This is equivalent to more than sixty years, if the two locks were embodied in one. During the past six years there have been but two serious collisions. On December 15 last I wrote a letter to Washington explaining everything in detail. The contingencies are all remote. The gate in the new lock will be ten feet narrower than the old ones. These will be sixty feet, while the others were seventy. I have taken every precaution to facilitate the repairing of possible damages. Fifty workmen, with the necessary tools, are kept constantly on hand. We also have a machine shop, and a temporary lock could be built in fifteen days. I have arranged to have the best of timber piled up under cover for repairing accidents to the gates at a moment's notice. This imber is all of exceptional quality. We have complete control of everything in connection with the canal, and can call on the soldiers to help us at any time if necessary. The mariners take as much pride in the matter as we do. If a vessel is abandoned in the canal we can order it removed at any time. The proper place for the new locks is where the old ones stand. I so recommended in my report for 1884. It is now a matter of contract, and change is scarcely practicable. If business keeps on increasing at the present rate, it will be five or six years before the 1881 locks reach their full capacity. If we had $1,000,000 a year the work couldn't be pushed any faster. We can fill the locks in eleven minutes and empty them in eight. We pass two vessels to a lockage, or from sixty to eighty per day. It is possible to pass five vessels per hour, although the average is about four. We passed as high as sixty-seven vessels in one day last season. It takes no longer to pass a big vessel than a small one. The governor general of Canada has recommended the immediate action of that country in reference to their canal, and that will probably help us out. The dimensions recommended for the new locks are 800 feet long by 100 wide. The estimate is $4,738,865. Within the past week I have written to Washington for consent to deepen and widen the canal with a part of the $250,000 appropriation. It is the largest work of the kind in the world."

ORE TRANSPORTATION.

A telegram from Ishpeming says: The question which vexes the minds of ore producers at present is not one of selling price or cost price; neither is it about quantity or quality or ore. It is about the transportation by lake to Chicago or Cleveland. Last fall the freight rates on ore from Two Harbors, Ashland, and Marquette went up suddenly when it became apparent that the production of ore from the Lake Superior fields would be much greater than was expected in the spring. In 1886 3,500,000 tons of iron ore, in round figures, were produced. This year the lowest estimate of the production of the four great ranges is 4,500,000 tons, and most mining men put the figure at 5,000,000 tons, always provided that transportation can be secured for that amount. Vesselmen, stimulated by the prospective profits of this year's business, have built a large number of new steamers; but they will be hardly adequate to care for the increased amount of ore to be carried. The large mines own their own vessels in several cases, and can put out as much ore as they wish, but the small ones must pay well for every pound of ore carried to Cleveland, Milwaukee, or Chicago. The railroads have made low rates to producers on ore hauled to Wisconsin furnaces, but these furnaces are able to smelt only a very limited amount of ore. The question is a very serious one to the smaller mines.

ABOUT IRON SHIPS.

So little is yet actually known as to the necessary conditions for safety in iron shipbuilding that there is wide speculation left to account for the many mysterious and unrecorded disappearance of vessels in mid-ocean which form a considerable percentage of maritime losses. These losses are generally put down to collision, foundering in a storm by shifting of cargo, or from some such serious cause of disaster. We think it is possible, however, that such serious disasters may frequently arise from the gradual accumulation of a small danger until it reaches a magnitude sufficient to wreck the vessel. Such a danger is the gradual corrosion of plates from the inside of the hull rather than from the outside, and under the cement bottom, where it would not easily be seen. When a ship's bottom is examined for soundness the outside would be chiefly looked to, and the nterior examination of the cement would be very likely more or less scamped, owing to the difficulty and unpleasantness of carrying out such examination. Nor do we think that shipowners and captains sufficiently realize the difference of conditions between wooden and iron ships, and the consequent importance to the latter of the cement backing. Formerly in the case of wooden vessels the timber was not likely to deteriorate in any very serious manner within a certain well-known life, and where more or less rotten timbers existed their considerable substance still gave them large coherence so as to avoid sudden disaster. Under the new conditions it must be remembered that the thinness of a ship's plate causes a very small amount of corrosion to absolutely destroy the whole of the cohesion and strength of the plate, should it occur. Iron and steel are very sensitive to the action of many acids, the resulting oxides or salts being invariably without tenacity or strength. The cement backing to the plates is for the purpose of protecting the interior of the plates from the action of any such acids, and from wear and tear. Many descriptions of cargo produce acid solutions which will very readily attack and destroy the iron or steel plates of a vessel; for instance, the molasses of sugar, or the solution of copper pyrites, or even the more or less acid bilge water, are all eminently capable of rapidly destroying iron or steel plates. A vessel, then, carrying such cargoes, depends entirely upon the perfect condition of the cement backing, and if Port and cement of good quality is used, and has not been broken and destroyed by wear or tear, such a backing can be thoroughly relied upon to protect the plating, but it is very difficult now to get good Portland cement. It is a the best but an adulterated mixture, and seldom is sufficient care taken in the selection of a proper freshwater sand for admixture with such cement. If the cement, then, is only cracked or perforated to a slight degree, all sorts of injurious solutions may readily obtain access to the inside of the plating under the cement, and may eat away the life of a plate in a few weeks or months, such rotten plate eventually causing a leak sufficient to founder the ship. The danger thus of a so-called leak in an iron or steel vessel is enormously greater than in the case of a wooden one. Leakage is not likely to take place between joints of plates as they will naturally close tighter with use and corrosion. Leakage, when it does occur, will probably be an absolute failure of the plate, and may be to such an extent when once the water breaks in, as to founder the vessel before any attempt at dealing with the mischief could be effected. It is wise policy, then, we think, for ship owners to see that they use Portland cement of the best quality, and that the cement is maintained without crack or flaw. Loose bolts or rivets rolling about u on the cement will often be sufficient to cut up the cement and crack it where it is of inferior quality. Such matters can be best confirmed by close examination of iron vessels in the graving docks, and we have no doubt that the practical experience of many of our readers will be able to confirm our views as above expressed, that many vessels safely reach home with a condition of plating through abnormal corrosion, which would, with a little more strain upon such plates, have produced a leak sufficient to founder a vessel.—London Marine Engineer.

LITERARY NOTICES.

Spring seems really here when The Atlantic for the month of May lies before us: and an excellent number it is, too,—opened by "The Courting of Sister Wisby," a New England study drawn to the life, by Miss Jewett; continued by a long and notable poem on an episode in French history, by Thomas Bailey Aldrich, and by a paper by Mr. J. Elliot Cabot,—"A Glimpse of Emerson's Boyhood," which his preparation for the forthcoming biography of Emerson has specially fitted him to write. Dr. Holmes interesting recital of his foreign experiences, "Our Hundred Days in Europe," and also the two serials, "The Second Son" and "Paul Patoff," are continued as usual; and Mr. Hamerton adds another instalment to his "French and English" series. In "China and the United States" some popular fallacies about our diplomatic, business, and missionary standing with the Chinese are discussed by A. A. Hayes; and a valuable study of Italian politics is contributed by Rev. Wm. Chauncy Langdon, in the form of a sketch of the statesman Marco Minghetti. "The Shakespeare Shapleigh Entanglement" is an ingenious Shakespearian pleasantry, and an able article on "The Decline of Duty," by George Frederic Parsons, discusses the indications of the prevailing want of conscientiousness in the worlds of labor, politics, and theology. "Flutterbudget" by Olive Thorne Miller; and poetry by Wm. C. Lawton, Clinton Scollard, and Andrew Hedbrooke, reviews of Browning's and Tennyson's new volumes, etc., and the usual departments conclude a number which is of unusual value.

WORSE THAN SMALL POX.

A GREAT DANGER WHICH MENACES AN UNSUSPICIOUS PUBLIC.

The Brompton hospital for consumptives, in London, reports that over fifty people out of every hundred consumptives, are victims of constipated or inactive kidneys.

Consumption is one of our national diseases, and the above report goes to prove what has often been said in our columns during the last eight years, that kidney troubles are not only the cause of more than half of the cases of consumption, but of ninety out of every hundred other common diseases. They who have taken this position made their claims after elaborate investigation, and their proof that they have discovered a specific for the terrible and stealthy kidney diseases, which have become so prevalent among us, is wise and convincing.

We have recently received from them a fresh supply of their wonderful advertising. They have challenged the medical profession and science to investigate. They have investigated, and those who are frank have admitted the truth of their statements. They claim that 90 per cent of the diseases come originally from inactive kidneys; that these inactive kidneys allow the blood to become filled with uric acid poison; that this uric acid poison in the blood carries disease through every organ.

There is enough uric acid developed in the system within twenty-four hours to kill half a dozen men.

This being a scientific fact, it requires only ordinary wisdom to see the effect inactive kidneys must have upon the system.

If this poison if not removed, it ruins every organ. If the bowels, stomach or liver become inactive we know it at once, but other organs help them out. If the kidneys become constipated and dormant, the warning comes later on, and often when it is too late, because the effects are remote from the kidneys and those organs are not suspected to be out of order.

Organs that are weak and diseased are unable to resist the attacks of this poison, and the disease often takes the form of and is treated as a local affliction, when in reality the real cause of the trouble was inactive kidneys.

Too many medical men of the present day hold what was a fact twenty years ago, that kidney disease is incurable, according to the medicines authorized by their code. Hence, they ignore the original cause of disease itself, and give their attention to useless treating of local effects.

They dose the patient with quinine, morphine, or with salts and other physics, hoping that thus nature may cure the disease, while the kidneys continue to waste away with inflammation, ulceration and decay, and the victim eventually perishes.

The same quantity of blood that passes through the heart passes through the kidneys. If the kidneys are diseased, the blood soaks up this disease and takes it all through the system. Hence it is that the claim is made that Warner's safe cure, the only known specific for kidney diseases, which is sold so largely by all dealers, cures 90 per cent of human ailments, because it, and it alone, is able to maintain the natural activity of the kidneys, and to neutralize and remove the uric acid, or kidney poison, as fast as it is formed.

If this acid is not removed, there is inactivity of the kidneys, and there will be produced in the system paralysis, apoplexy, dyspepsia, consumption, heart disease, headaches, rheumatism, pneumonia, impotency, and all the nameless diseases of delicate women. If the poisonous matter is separated from the blood as fast as it is formed, these diseases, in a majority of cases, would not exist.

It only requires a particle of small pox virus to produce that vile disease, and the poisonous matter from the kidneys, passing all through the system and becoming lodged in different weak points, is equally destructive, although more disguised.

If it were possible for us to see into the kidneys, and how quickly the blood passing through them, goes to the heart, lungs and other parts of the system, carrying this deadly virus with it, all would believe without hesitation what has so often been stated in advertisements in these columns, that the kidneys are the most important organs in the body.

They may regard this article as an advertisement and refuse to believe it, but that is a matter over which we have no control. Careful investigation and science itself are proving beyond a doubt that this organ is, in fact, more important than any other in the system as a health regulator, and as such should be closely watched, for the least sign of disordered action.

HARBOR BARS.

The Buffalo Express says: The opening of navigation discloses the fact that there is an unusual number of bars in the harbor, formed, it is thought, by the movement of ice in January. The obstruction is proving a serious matter already. One day this week nearly every loaded vessel in port was aground. At that time the water was low, but yesterday, with wind favorable for a good depth of water, the difficulty continued. The big propeller Cumberland went aground at the Lackawanna warehouse and ran a foot out, where she lay up to a late hour yesterday, when an attempt was made to pull her off with several large tugs. The first attempt was not successful, and ahalt was ordered to wait for the water to rise. The schooner Alverson, drawing only 14½ feet, touched bottom several times on her way to her elevator yesterday. Not only is the creek in this bad shape, but a bar is reported in the Blackwell near the Watson elevator.

City Engineer Krause said last evening that such a condition of things so early in the season was quite unusual. The bars usually form later and no contracts are made for dredging until May, after the annual estimates are confirmed. He had understood that the harbor master had been to see him, but there was nothing that he could do. To order the work without a contract would be a misdemeanor. The regular course would be to wait until the estimates were confirmed and then ask for bids and let the contracts. This would take at least two weeks in May. He knew of no way out of the trouble but to obtain the privilege of ordering the work begun in advance of the contracts and he should ask for this next Monday.

General O. M. Poe says the work on the Limekiln crossing is completed, and if vessels keep in the channel they will have a good twenty feet of water.

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We have associated with us Messrs. H. D. Coffinberry and Robert Wallace, late of the Globe Ship-building Co., and the Globe Iron Works, and Wm. M. Fitch, late of the Winslow Line of Steamers. We have made the following appointments: Mr. O. N. Steele, Assistant Superintendent; Mr. Thomas W. Bristow, late foreman of Wyandotte Ship Yard, Superintendent of Ship Yard; Mr. Quincy Miller, Superintendent of Boiler Shop; Mr. John Stoney, Superintendent of Foundry, and Mr. Jas. C. Wallace, Draughtsman.

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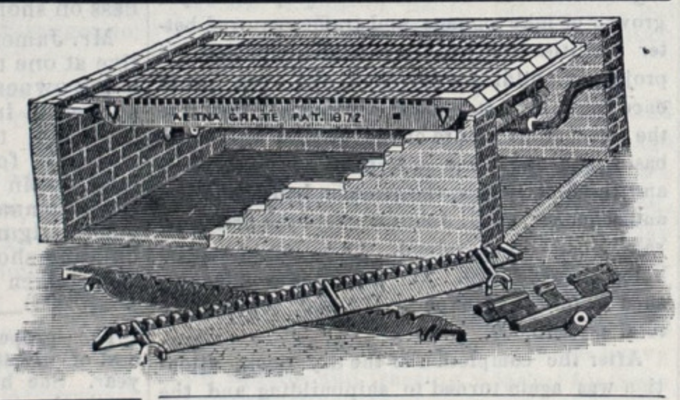

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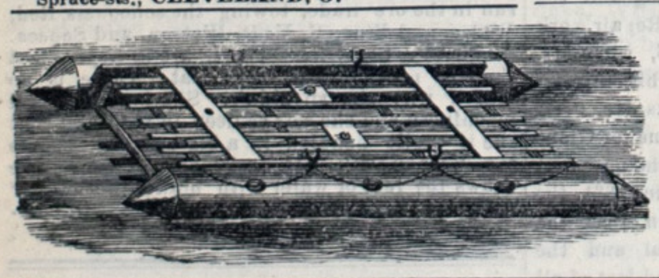

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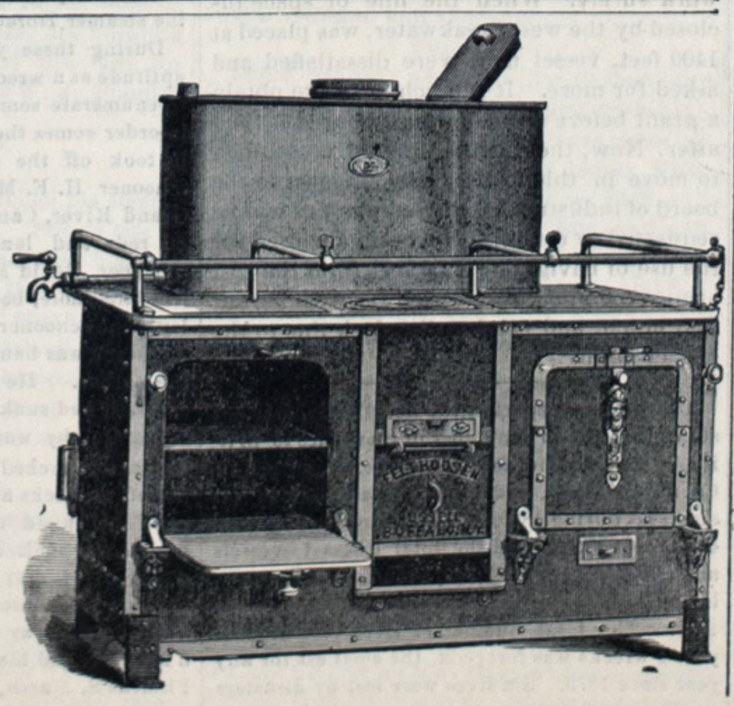

LAKE SHORE & MICHIGAN SOUTHERN.

Commencing Sunday, Nov. 14 1886 at 5 o'clock p. m the time given in the figures below is the new standard (Ninetieth meridian) time, which is thirty-three minutes slower than Cleveland time proper.

Eastward.	Arrive	Depart.
No 4, Fast Limited Express	*2 55 A M	*3 05 A M
No 8, N Y, B & A Express	*8 25 A M	*8 55 A M
No 26, Elyria Accommodation	†7 45 A M	.....
No 24, Buffalo Ac'm via Sandusky	†10 30 A M	†10 45 A M
No 24, Toledo Accom via Norwalk	†10 30 A M	†10 45 A M
No. 10, New York "Flyer"	.....	*12 noon
No 12, N Y & B Fast Express	*2 10 P M	*2 45 P M
No 2, Night Ex via Norwalk	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky	†9 40 P M	.....
No 26, Conneaut Accommodation	†4 25 P M	.....

Westward.	Arrive.	Depart.
No 1, Fast Limited Express	*12 15 A M	*12 25 A M
No. 23 Cleveland Express	*2 15 A M	
No 3, Chicago Express via "	‡5 20 A M	6 35 A M
No 25, Mich Accom Norwalk	.....	†6 30 A M
No 21, Toledo Ex via Norwalk	†12 50 P M	†3 20 P M
No 5, St Louis Ex via Sandusky	*10 45 A M	*10 50 A M
No 9, Chi Pac Ex via Norwalk	*6 15 P M	*6 40 P M
No 31, Elyria ac to Elyria only	.....	†4 30 P M
No 27, Conneaut Accommodation	†8 10 A M	.....

Sunday train for Nottingham—Depart 8:15 a. m and 1:45 p. m.; returning, leave Nottingham at 8:50 a. m. and 3:45 p. m.

Reference marks—* Daily, † daily, except Sunday, ‡ daily, except Monday.

A local Cleveland and New York sleeper and dining car daily on No. 10, leaving Cleveland at 12 noon; arrive Grand Central depot, New York, 7.30 a. m.

For full information as to trains and connections apply at the Union ticket office, corner Bank and Superior streets, under Mercantile Bank.

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Marine Record.

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A. A. POMEROY, EDITOR AND PROP'

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MARQUETTE, MICH.—J. A. Vannier.

ESCANABA, MICH.—Wm. Godley.

SARNIA, ONT.—D. McMasters.

Subscribers and others are respectfully invited to use the columns of the MARINE RECORD for the discussion of pertinent topics.

Entered at the Post Office at Cleveland as second-class mail matter.

CLEVELAND, O., THURSDAY, APRIL 28.

THE UNCERTAINTY OF SOUND.

There has been much comment on color blindness, and measures have been taken by the board of supervising inspectors to refuse to pass applicants for licenses of masters and pilots because they can not distinguish colors. Many a good sailor man has been deprived of his natural means of livelihood by reason of this supposed defect in his sense of sight. Color blindness is not a blunder but a defect, but there is greater danger of collision or of putting a vessel ashore to be guarded against than the one above named, one which can not be looked at in any other light than as a blunder of hearing, and Talleyrand says, "a blunder is worse than a crime." Many a good vessel has been lost in consequence of faulty hearing, and who can guard against it, his ears being unaided by other precautions? We have our fog signals constantly at work on land at dangerous localities during the prevalence of a fog, which can be heard ten or twelve miles away, and our fog whistles and bells on vessels, but if the distance from the sound is overestimated or underestimated great disasters may happen. Still greater have been the dire effects of mistakes made in locating the direction from whence the sound comes. Any one who will think a moment on this subject will realize how vague an idea of location a sound gives an unassisted ear. Who can tell from which direction a street car is coming from hearing its bell if he can not see the car? And yet our steamers, during a fog and at night, speed twelve to fourteen miles an hour, taking all chances of meeting disaster on our crowded lakes. It would be far better at such times to follow the rules governing pilots to the letter regarding speed, etc. We can cite several instances of collisions and stranding during the last three or four years because the source or location of sound of fog whistle or bell could not be determined.

A sound may be heard at one time at a distance of several miles, while at another time it can not be heard at more than one-fifth of the same distance. While a fog whistle is generally heard further with the wind than against it, in some instances the reverse is the case. The whistle or bell may be lost in passing from one locality to another in the same vicinity, the distance from the source of the sound being the same. The sailor should, therefore, bring other senses into play to verify or add to his hearing. When the sound of a fog whistle meets his ears, and he can not distinguish the source, he should double his lookout if the sound denotes that a vessel is in the vicinity, to avoid collision, or drop his lead to take soundings if he is in the vicinity of a land signal, to determine his location by the depth of water he finds under his keel. In case these precautions are neglected the question arises whether or not the sailing master is guilty of a blunder. It often occurs that a vessel gets lost, or outruns her time from one land mark to another. One of the splendidly appointed steamers of the Canadian Pacific line, put on the lakes two years ago, was destroyed and many lives lost because the master did not verify his position by sounding for depth of water; another vessel, the master of which thought he was sailing up Lake Michigan, found his vessel stranded on a shoal in Green Bay. By mistaking the source of sound, two fine steamers were lost by collision, one on Lake Superior in 1885, and the other in 1886 on Lake Michigan.

There is not much redress for errors of this nature. Decisions have been rendered by federal judges that an error of five points, or an eighth of a circle, in locating a vessel's position by the sound of her signal in a fog, is not necessarily a fault under the proved aberrations in the course of sound. The question has been fully discussed and a careful array of quotations cited. In the cases mentioned of collision, each steamer, knowing that there was another within hearing distance, did all the law required in sounding fog signals, but neither was sure of the position or course of the other and could not be made certain by the sounds, but each steamed on and disaster occurred. Such are the dangers to which we are subjected by blunders in hearing that much attention is now being given by practical physicists to aiding the ear with mechanical means. But all this mechanism will be of little avail unless the fact that the ear may be deceived is admitted, that mistake is not only possible but probable. All the instruments to aid hearing will be of no practical value in distinguishing location of sound unless other senses are brought to the aid of the ears.

CLEVELAND LAKE FRONT.

There has been quite a warfare in Chicago and Buffalo and other lake ports, between city authorities and railroad companies over land steals by the companies. The aptitude with which the railroads acquire the most valuable real estate in a city is wonderful. It has been generally supposed that the railroads running into Cleveland along the lake line were confined to the right of way, especially on the east side of Cuyahoga river, but they have been making land since 1856, and they now have quite a nice little farm around the old depot. It will be remembered that the waters of Lake Erie washed the foundation of the old depot, but now the lake line is confined by railroad real estate, made since that date by 500 to 1000 feet lakeward. This is all right as long as it serves the right purpose and does not encroach on the interests of navigation. Docks can be built and other improvements made out to the fourteen feet depth which will really be a good thing for the vessel interest; but when the aggressive character of the railroad magnates is considered it is now time for vessel men to begin to move. The line beyond which docks can not be built has been established by the secretary of war, and is 1400 feet from the line of the breakwater. This is not sufficient for the purposes of a harbor of refuge, but a limited number of vessels can move around with comparative ease. It is about 1800 feet, which is not too much, between the west end of the east arm of the breakwater and the same line east of Cuyahoga river, and about 1400 feet from the east end of the east arm and said line.

If the vesselmen will take the trouble to look into this matter they will find that the railroad companies are now preparing to make another raid on this proposed new basin. They are driving piles and filling in the intervening spaces with stone, and will soon have an unsurpassed system of dockage extending farther into the basin than the interests of navigation will warrant. Railroads are willing to work slowly but they work surely. When the line or space inclosed by the west breakwater, was placed at 1400 feet, vessel men were dissatisfied and asked for more. It is much easier to obtain a grant before some one has secured it, than after. Now, then, is the time for vessel men to move in this matter and suggest to the board of industry that the secretary of war be requested to establish the basin inclosed for the use of navigation 1800 feet from the east arm of the breakwater, where it will permit that much, and confine the dock line to the proper limit.

THE annual report of the marine department states that the total number of casualties to British, Canadian and foreign sea-going vessels in Canadian waters, and to Canadian vessels in foreign seas during 1885, was 307, representing 124,442 tons register, and the total losses to vessels and cargoes was $1,757,739, a much smaller number of wrecks than has occurred in any year since 1876. The total number of lives lost in last year's wrecks was forty-six, the smallest for any year since 1870. Six lives were lost by disasters on the great lakes.

OCEAN FREIGHTS under somewhat freer offerings of cargo, chiefly breadstuffs and provisions, in good part through rates by the regular steam packets on berth, hardened early in the week, on grain for ports in Great Britain perceptibly, but with the further rise in values of wheat and the consequent falling off in the requirements of freight accommodation for grain the market reacted again, and on Thursday evening, April 21, closed easy, with room for Liverpool hence quoted at 1½d., against 2d. paid at the outset, and from Baltimore and Philadelphia each at 2d. Freights closed dull and steady.

MR. JAMES W. MILLEN, vice president of the Lake Carriers' Association, at Detroit, reports to them as follows concerning the new shoal opposite Detroit, on which there is only 16½ feet of water. "Commencing about 100 feet above Captain Drummond's office, the shoal is 600 feet from the dock and 700 feet long, and from 30 to 50 feet in width. The soundings show a very hard bottom. Indications show boulders. Soundings are 17 feet or 16½ feet for about 700 feet, and run from 18 to 19 feet for 2,000 feet further down the river."

GEO. PRESLEY, SHIPBUILDER.

Mr. George Presley will retire from the management of the Cleveland Dry Dock Co., on the 1st of May, having sold his interest for a good round sum to Mr. Pankhurst, manager of the Globe Iron Works Co., and others. Mr. Presley is one of Cleveland's pioneers, and is noted for his integrity in business, decision and firmness of purpose. He has been active in business since he came to Cleveland from Clayton, N. Y., in 1843. He, in 1844, in company with Mr. Harvey Stephens, who died some years ago, planked the schooner Cumberland and steamer Empire. In 1845, in company with Mr. Ira Lafrinier, also dead, framed and planked the propeller Manhattan and steamer Ohio. The same year he built the schooner H. N. Gates. In the spring of 1847 he built the schooner Alpha and Gypsy, and in the following winter, in company with Mr. Calkins built the brig Isabella and propeller Niagara. In 1856 Mr. Presley went into partnership with Mr. H. Stephens and constructed, at this port, a marine railway, which was worked by horses, for the repair of vessels, and during the same year these gentlemen built the propeller Prairie State; in 1851 the schooner Buttles, in 1852 the schooner White Cloud, in 1853 the schooners Lady of the Lake and Black Hawk, in 1854 the bark Black Warrier, in 1855 the bark L. M. Hubby.

In 1856 a demand for increased facilities for docking or raising was manifested and the marine railway was enlarged and steam applied to work it. The firm of Stephens and Presley then took a contract for the construction of the schooner Cuyahoga and in 1856 and '57 the schooners Miami and Muskegon were built by them and in 1858 the schooner Mary Ballard and propeller Ferry; in 1849 the schoonsr Morning Light, 1860 tug Peter Smith, 1861 the propeller S. D. Caldwell, 1862–3 the propellers Maine, City of Boston and City of New York for the Northern Transportation Co. In 1868 the tug W. D. Cushing and schooner Fayette Brown were built.

In 1871 the firm of Stephens and Presley, finding that the demands of the times, the rapid growth of lake tonnage and traffic required better facilities for handling vessels, conceived a project of building a dry dock, and work was at once begun. After many difficulties, owing to the treacherous nature of the ground where the basin was sunk, the enterprise was completed and the first vessels, the steamer Lady Franklin and schooner C. H. Johnson were the first vessels docked in Cleveland, the outlay of capital being about $67,000. The dock was soon lengthened 60 feet at an expense of $8000, making the total cost $75,000.

After the completion of the dry dock, attention was again turned to shipbuilding and the tug Tom Dowling was turned out. Repair work then kept the dock busy until 1876, when Mr. Stephens withdrew from the firm, his interest being taken by the Globe Iron Works, Mr. Presley remaining as manager, the name of Globe Dry Dock being given it. In 1880 the new firm built the steamer Smith Moore, in 1881 the steamers Republic and Columbia, in 1882 the steamers Colonial and Continental and the schooners Specular and Magnetic, and last of all the steamer Horace A. Tuttle in 1887.

During these years Mr. Presley showed his aptitude as a wrecker, and it will be interesting to enumerate some of his work in this line; first in order comes the Twin Brothers, loaded, which he took off the shoals off Fort Niagara, then schooner H. E. Mussey from the beach below Grand River, Canada, this vessel being dragged 80 rods and launched into the harbor; the schooner, David Morris, grain laden, was taken from the shore, below Point Abino, by Mr. Presley; the schooner Cuyahoga, ashore below Port Colborne was hauled 100 rods and launched into the harbor. He raised the bark B. A. Stanard capsized and sunk off Rond Eau; the schooner L. A. Quinby was taken off the beach at Rond Eau and launched into the harbor; the brig Banner off the rocks at Point au Barques, Lake Huron; he raised the schooner Fayette Brown, which was sunk at the head of Lake Erie with a cargo of ore; released the schooner David Stewart from Pilot Island, Lake Michigan, and while on the way up to the Stewart, a signal of distress called him to the rescue of the schooner Phineas S. Marsh, which he also released. His wrecking services off Cleveland include the schooners Maid of the Mist, Oroka, George Worthington, E. S. J. Bemis, George Davis, and several others which can not now be remembered.

Mr. Presley has also been quite an element in politics, but has always been beaten, not because he is not a winning man, but that he has always been on the losing ticket. It is needless to say that it was the Prohibition ticket.

We now desire to say that the MARINE RECORD wishes him the same health and good fortune in his retirement, that has followed him through long years of active business life.

M. E. B. A. NOTES.

Among the many features belonging to No. 9, Milwaukee, is a beam engine, whittled out of wood, the work of Chief Engineer Chas. Ross, of the steamer Menominee.

John McCaffray, of No. 9, Milwaukee, is chief engineer of the steamer Champlain. This gentleman has had charge of this boat for a good many years, and speaks of her with as much pride as some enthusiastic lover might of his best girl.

Mr. A. S. Ellsworth, the treasurer of No. 9, is the engineer of the Daisy roller mill of Milwaukee, and the boys say that he has steamboat on the brain. There are few nicer working compound engines in the country than the one under his control.

National President Fuller has just instituted associations Nos. 57 and 58, respectively; situated at Roundout, N. Y., Georgetown, S. C. An application has been made for associations in Norfolk, Va., Charleston, S. C., Boston, Mass., and New Orleans, La. The National President says that the entire seaboard will be at work before the end of the year.

No. 50, New York, that in 1886 had thirty-two members, has now a membership of five hundred, every man of which is employed. No. 56, of New York, with a membership of two hundred, has no idle men.

The national secretary, on a recent visit to Milwaukee, addressed the association of that place, and surprised the members by the fact that he was not sixty years old as they supposed he was.

No. 13, of Philadelphia, initiated and reinstated over fifty members since the first of the year.

J. J. O'Conner, recording secretary of No. 4, Chicago, may not lay any claim to it, but he is nevertheless one of the best mathematicians in the order, and the exercises that he gives the members of No. 4 on the blackboard each Tuesday evening are not only interesting, but decidedly instructive.

Association No. 4 holds her last meeting on Tuesday the 26th, when she will adjourn to meet on the first Tuesday of December.

Mr. John Galwey, national treasurer, who is chief engineer of the steamer Alaska, has just wheeled his boat into line after a thorough repairing, and will, as usual, handle the starting bar between Detroit and Sandusky.

Mr. James Burke, a member of No. 4, has charge of the home insurance building, and with the addition that has been made to the department, it can safely be said that he has one of the finest plants in the city of Chicago.

J. W. Stevens, former secretary of No. 51, Muskegon, is engaged on shore in Chicago.

Captain J. B. Hart, it is said, will go sailing this year from the port of Sandusky. Captain Hart is past president of No. 48, and for several years has been engaged in business on shore.

Mr. James H. Fitzgerald, the representative at one time for No. 43, of Port Huron, is the owner of a 2:40 horse, and has issued a general invitation through the press, so they say, to the members of the order, wherever found, to visit Port Huron and take a spin with him. If the genial Fitzgerald manages blooded stock with the same good judgment that he manages an engine building shop, you may soon expect to hear him spoken of as a second Robert Bonner.

The propeller Vernon, built last year at a cost of $78,400, will not carry passengers this year. She has been chartered for the season to run in the ore trade, towing the schooners Red, White, and Blue, S. V. R. Watson and Seneca. A. Booth & Sons, her owners, are in hopes that she will prove a good tow boat. There is no reason why she shouldn't. She has powerful machinery and she sets so deep in the water that she is easily handled in a big sea. Of course the Vernon will not carry ore herself. She draws 13½ feet of water with nothing in but her fuel. Captain Redmond Prindiville will command her.

PROPOSALS FOR REPAIRS, &c.

U. S. ENGINEER OFFICE, 89 EUCLID AVENUE,
CLEVELAND, OHIO, April 20, 1887.

SEPARATE SEALED PROPOSALS, in duplicate, will be received at this office, until 11 o'clock a.m. Monday, May 23d, 1887, at which time they will be opened in presence of bidders, for repairs at the following harbor:

PORT CLINTON, OHIO.

Proposals will be accompanied by a written guarantee that in case the bid be accepted, contract will be entered into with good and sufficient security within ten (10) days after notice of such acceptance.

Forms, specifications and other information can be obtained at this office.

The United States reserves the right to reject any or all proposals.

L. COOPER OVERMAN,
Major of Engineers.

PROPOSALS FOR CONSTRUCTION OF PARAPET WALL.

U. S. ENGINEER OFFICE, 89 EUCLID AVENUE,
CLEVELAND, O., April 12th, 1887.

SEALED PROPOSALS, in duplicate, will be received at this office until 11 o'clock a. m., on Tuesday, the 10th day of May next, at which time they will be opened in presence of bidders, for constructing 4500 lineal feet, more or less, of Parapet Wall on West Breakwater at Cleveland, Ohio.

Forms, specifications and other information can be obtained at this office.

The United States reserves the right to reject any and all proposals.

The sum allotted for the work, inclusive of the amount necessary for superintendence and office expenses, is about $30,000.

L. COOPER OVERMAN,
Major of Engineers.

[*Around the Lakes Continued from 1st Page.*]

DETROIT.

Horace M. Mitchell, of Ashley & Mitchell, marine men, died suddenly Saturday night. He was part owner of the Alaska and Pearl, which run to Cleveland and the islands.

The City of Alpena, of the Detroit & Cleveland Steam Navigation Company's line, left here Saturday night for Cleveland, for the last time this season. The City of Detroits' improvements are now complete and she will take her regular place in the line between Detroit and Cleveland. The City of Alpena will commence at once to run on the line between Detroit and Mackinac.

The new light ship was moored in her position off Grosse point, Lake St. Clair, last Thursday. Her hull, cabin and lantern house are painted red. She had one mast, carrying a cage day mark painted black. A course from the light ship midway between Windmill point and Belle Isle light passes through the deepest water. Vessels should pass to westward of the light ship, not closer than 100 yards. They will thus be in the best water and avoid the heavy anchors by which she is moored. These anchors lie northeast by east and southwest by west, each anchor being thirty fathoms from the vessel's bow.

The Flint and Pere Marquette steamer No. 3, launched at Linn's shipyard, Gibraltar, recently is nearly completed, and the keel for a large barge for Chicago parties has been laid. A steambarge for a Milwaukee firm will also be built.

It is calculated that the great car transit steamer now being built by the Detroit drydock company for the Michigan Central to be used in the straits of Mackinac, will be capable of going through the heavy ice in the straits or elsewhere in any winter, however severe. Active Work has been commenced on the boat, and a large section of the frames amidships are in position.

The Darius Cole is getting a new walking beam at the Detroit drydock.

Captain Eber Ward, manager of the Ward Lake Superior line, who has been seriously ill at Harrisburg, Pa., is recovering.

The grain fleet that moved out Sunday bound for Buffalo was the largest that ever left this port. It included 49 vessels carrying 1,707,000 bushels of wheat and 90,000 bushels of corn.

The tug Stranger, which was burned two years ago at Trenton, and sunk at Grosse Isle bridge, was sold at United States marshal's sale Monday. If the engine and boiler of the tug are not resting on the bottom they will be nearly as good as when the tug burned. The Stranger was owned by Captain J. Laframboise.

The steam yacht Clio was sold at marshal's sale on Monday, at Detroit, and brought $165. J. R. Russell bought her. Captain W. H. Stodard bought the tug Stranger for $265.

The schooner M. F. Merrick has been sold by Esseltyne to Cash Taylor, of Detroit, for $7,000.

The schooner Harvey Bissell, which went ashore near St. Ignace last fall, has been sold to Boutell and others, of Bay City, for $13,000. She is now being towed down from St. Ignace to Bay City by the tug Peter Smith. She goes into drydock at Bay City for repairs as soon as she arrives.

Mr. E. J. Vance, of Bay City, is purchaser of the barge Favorite for the sum of $16,000. In making the purchase it is expected that the Favorite will go as a tow of the steamer Donaldson this season, the latter owned by Mr. C. Bradley, of Detroit.

A steamer being built at Trenton, in Craig's shipyard, has been sold to Captain J. C. Gilchrist and others. The price paid is not definitely stated, it is believed to be something over $110,000. It is understood that she will be ready to launch about September 1.

Contractor Dunbar of the Limekiln crossing says that reports to the effect that it is dangerous for vessels to go over the crossing on account of lack of water have their origin among the pilots down there who find their occupation gone since the government has widened and deepened the channel. The steambarge Devereaux delayed crossing the other day, he says, on account of the heavy wind blowing, which it was feared would cause her to make leeway and get out of the channel.

The lighthouse tender of the Detroit district will be met at Mackinaw City by Commander Clarke, of the new ninth district. St. Clair River will be buoyed, as well as other navigable waterways.

DETROIT, April 25.—Passed up, forenoon—Propellers, Ogemaw and barges M. M. Drake, Newburg; Kittie M. Forbes, and consort, Waldo Avery and consort, Hecla, New Orleans, Waverly.

Afternoon—Propellers Colorado, A. Folsom, schooners F. W. Gifford, Nellie Mason, Cuba; propellers William A. Haskill, V. H. Ketchum, W. L. Frost.

Down, forenoon—Propeller S. C. Hall and barge Sanilac.

Afternoon—Propellers Nelson Mills and barge Iron Chief and consort, schooners St. Peter, Groton, John Breeden.

Up—Iron Duke and consort, Onoko.

DETROIT, April 26.—Up, Monday afternoon—Propellers Tacoma, R. A. Packer, Fred McBriar, and consort.

Up, Tuesday forenoon—Propellers R. P. Ranney and consorts, J. H. Outhwait and consort, Anna Smith, and schooner Red Wing, Columbia and consort.

Afternoon—Propeller Queen of the West, John Pridgeon, Jr., William Edwards and consorts, E. B. Hale, and schooners Saveland, G. Sherman, Benton and barges.

Down, afternoon—Propellers Leland, schooners Barbarian, William Shupe, propellers Veronica, R. P. Flower.

DETROIT, April 27.—Up — Propellers Fioga, Philadelphia, Albany, H. J. Jewett, George King with schooners Teutonia, Frank Perew and Kingfisher, Business and consort, Arabia, Clarion, Rochester, City of Cleveland and schooner Thomas Quayle; propeller C. Hall and barges; schooners Constitution, Reindeer, Johnson.

Down—Propellers Kalkaska, City of Concord.

Captain Grummond's tug, the Leviathan, is at Mackinaw City where she will remain during the coming season to attend to the wrecks which may occur in that region.

MACKINAW CITY.

Special to the Marine Record.

Straits fully open, Kasota, first boat up Monday, Veronica, first down Tuesday morning.

Down—Kershaw, 6 p. m.; Swain, John O'Neil, 6:20; Barnum, 7; Coffinberry, Newcomb, 7:30; H. Chisholm, A. Cobb, S. P. Ely, A. Bradley, 7:40; Monteagle, White Star, Mystic Star, 8:20.

Up—Argonaut. Inter-Ocean, Wocoken, Jim Sheriffs, 9 a. m.; Samuel Mather, 10:30; W. R. Stafford, Mears, James T. King, 11; J. H. Devereaux, G. H. Warmington, 11; Calumet, 11:30.

The steamer Australasia and consort James Couch, grain laden, from Chicago to Buffalo, were crowded ashore by ice six miles below here Monday morning. The Couch touched lightly. The tug Owen went to their assistance, pulled the Couch into deep water, and then began work on the Australasia which was also released without suffering damage.

MACKINAW CITY, April 25.—Down Veronica, Australasia, James Couch, R. P. Flower.

MACKINAW CITY, April 27.—Down—Rhoda Emily, Fairbanks, Milwaukee, Syracuse, Boston, Vernon, C. C. Barnes, Red White and Blue, T. W. Palmer, David Vance, Balentine, Northwest, S. C. Baldwin and consorts, Chicago, Nipigon and barges, R. B. Hayes.

Up—New Orleans, City of Rome, Oceanica Cuba, Progress, Colorado, Frost, Haskell, Drake, R. A. Packer, Ketchum, Tacoma, Owen, Michigan, Nicholson, Avery, Hawgood, Folsom, Gifford, Nellie Mason, K. M. Forbes and consort, Waverly, T. P. Sheldon, Manhattan.

There is lots of ice in the Straits, but steamers are working through without much trouble.

SAULT STE. MARIE.

The Sault River is open from Round Island, Waiska Bay, to the flats in Lake George. The recent heavy northeast blow carried out the ice from White Fish Point. Fishermen from Parisienne Island Tuesday report the ice solid and unmoved, in Whitefish Bay. Mud lake, the sticking point of the river is solid, heavy laden teams having crossed it two days ago. We have had heavy snow squalls, and freezing weather for three days. With favorable weather the river cannot open before May 1. The canal has been ready several days.

GRAND HAVEN.

The new steambarge Alice M. Gill, owned by Gill & Sons, of Newport, was launched at Grand Haven, on Wednesday. Captain Robinson will command her. She is 125 feet long, 28 feet beam, and 10 feet hold; engine, 24 by 26; boiler 7½ by 14. D. Robertson & Company, her builders, are building almost an exact duplicate of the Gill, for John Long, of Chicago, and W. J. Thompson of Riverdale.

PORT CLINTON.

Special to the Marine Record.

Captain Gillespie has launched his steambarge, the J. Homegardner. She is one of the finest boats on the lakes. She has two derricks, capable of lifting ten tons each. She was built for the log and stone trade.

Captain John Duff has arrived with the schooner C. B. Benson, and has commenced rebuilding. He has a large gang of men at work, and will get her out as soon as possible.

SAILOR.

ST. IGNACE.

The tug Peter Smith left here on the 25th with the schooner Harvey Bissell for Bay City where the Bissell will be drydocked. The Bissell will be remembered as the boat that went on Green Island shoals during the worst gale of last fall. She was twisted out of shape when brought to this port and leaking badly.

ST. CLAIR FLATS.

Special to the Marine Record.

The McNiff & Son's range lights will be in running order on the night of April 27, and can be depended upon for the balance of the season. All those in arrears for the maintenance of the range lights at the St. Clair flats for 1886, will do us a needed favor when we call for the same. We hope the owners of steamers who are opposed to private lights will see the benefit they are deriving from the same, and make it an object to us to keep lights burning. The range below Bedore's will be shifted down farther, since the wreck is gone on the Canada side of the channel, opposite Bedore's.

The tug Kittie Haight, bound down, Tuesday at 1:30 a. m., with schooners Barbarian and Wm. Shupe, ran aground at the Southeast bend, on the Canada side. The Barbarian ran on and swung around with the current, and the Shupe ran into her, cutting her rail and bulwarks through, just forward of the main rigging, and carrying away the Shupe's jibboom, head gear and a part of her stem, and after getting clear of the Barbarian got alongside of Bedore's dock. The Haight worked herself off soon after. The tug Dan Connelly, of Sandusky, bound down, mistaking the lights, tried to take the Canada side of the grounded tow and ran on also, just above the Barbarian. The Haight released her after daylight, and with the assistance of the Connelly, released the schooner. This is only a commencement of accidents at the St. Clair Flats. Were the range lights in running order it would not have occurred. The lights will be put in operation the 27th, if the weather will permit the driving of stakes, etc.

MCNIFF & SON.

MARINE CITY.

Special to the Marine Record.

The tug Record arrived here Thursday evening with a schooner and barge in tow, bound up, and on account of the large amount of ice running in the river, was obliged to wait until morning.

The Idlewild, after waiting from Monday until Friday at Sarnia Bay, passed down about noon without making any landings on the American side, as the ice was running in such large quantities on this side of the river.

The steambarge P. H. Birckhead and the J. C. Pringle left here Saturday about the same time, bound up, and we surmise that there will be some extra fuel burned before they get to Saginaw Bay.

Quite a number of steamers passed up on Sunday, among which were the Kalkaska, Wocoken, Everett, Minch, Jim Sheriffs and consort, Ira Chaffee and tow. The Everett made a call for Mate Frank Cottrell, and the Chaffee called for Captain Townsend, who goes as her mate until something better is open, he being sold out of his last season's position.

BOB.

ASHLAND.

Immense ore shipments will be made from Ashland this year. The estimated output of the Gogebic range is 1,500,000 tons. The S. J. Macy, Camden, Ashland, Cumberland, B. F. Bruce, James Pickands, Keystone, New Orleans, Geo. T. Hope, Ishpeming, S. H. Foster, Crosthwaite, and J. G. Masten are chartered for the season from Ashland to Lake Erie ports. The Queen of the West, Wetmore, Brunette, Tuttle, Queen City, Minch, Winslow, Business, Swain, and Helvetia are chartered to run from Ashland to Lake Erie ports from the opening of navigation to September 1st. The Onoko is chartered for eight trips from Ashland to Lake Erie ports. The Ranney, Negaunee, E. B. Hale and John Martin are chartered to carry coal to Duluth and ore from Ashland to Cleveland. The Escanaba, Parker, Argonaut, and Sage are chartered for eight trips between Ashland and Chicago.

DULUTH.

There are two vessels in the harbor—the Siberia and David Dows—loaded with 141,000 bushels of wheat. Besides these there are here the Alcona and Alta, the James Fisk, Jr., and the John L. Hurd. The Fisk will run in Ward's Lake Superior line, and will probably take out a load of flour. The Hurd is one of the Lake Michigan and Superior line, and will run in the south shore trade until the City of Fremont arrives from Chicago to take her place.

MUSKEGON.

Shipments on the 23d were 1,310,000 feet of lumber and 1,400,000 shingles. The shipments from this port for the week ending April 23 were 12,482,000 feet of lumber, 1,530,000 shingles, 805,000 lath, and 345 cords of slabs.

GREEN BAY.

The first arrival at this port was the steamer City of Green Bay, which came in Monday from Menominee. She encountered more or less ice all the way until abreast of Oconto, and was about three hours in rounding Peshtigo point. Green Bay is entirely free, but Sturgeon Bay and other east ports are closed. Boats from Sturgeon Bay are expected within the next twenty-four hours.

SAULT STE MARIE.

Special to the Marine Record.

Heavy rains here on the 20th and 21st. The ice in the river in front of the town is about gone.

Captain John Smith, late of the tug Anna Dobbins, is to go master of Frank Perry's tug Andrew J. Smith; the Hon. Chick Smith goes mate.

The Spencer is about fitted out, also the Sparta and consort. The Eliza Gerlach has her canvas on. The tug Niagara and fleet are about ready. The Minnehaha, is discharging her cargo of 1200 tons of soft coal here. The yacht Antelope is all ready to take her place on the ferry route, between the two Saults. The Flora Holden will try to run on the ferry route again.

The Trempf fleet is near ready. Captain Joseph Paul goes as master of the tug Peck, Captain Wm. Greenough on the Mystic and John Connolly as chief engineer. Mike Frishott, chief of the Peck, is on the sick list. He strained his back quite severely, lifting some heavy machinery.

The Hickler and Green tugs, and dredge fleet are just about ready to begin work. The Huron City and consorts are anxiously waiting for Mud Lake to open up, so they can get down the river.

The fast yacht M. S. Trempf is getting her annual over-hauling, John Ermatinger is her master and the old stand by, Ed White, is chief.

A wrecking outfit leaves here as soon as possible, to take the propeller St. Marie off the beach above Whitefish point. She is not hurt any and lays on a smooth sand beach.

Boats will have no trouble getting here by May 1st. A few days hot sun will rot the ice in Mud Lake, so that any thing can come through.

There is a grand opening here for a first class ferry. The Beard or Dormer of Port Huron, is what is needed here. The Holden and Antelope are very fair boats of their kind, but are too small for the business. There is no boat here that can really be called an excursion boat, and now that we have some of the best hotels on the lakes and the Sault, on the boom and rail roads coming in from all directions, two good ferrys that can take teams over is what is wanted.

MILLER.

OSWEGO.

Special to the Marine Record.

The Oswego fleet are all getting a coat of black except West Side, Dunning and Preston. The schooner John R. Noyes is getting a new jibboom. The barges Buel and Bolivia have been docked and are now ready for sea, none the worse for their being ashore.

The tug Proctor had a easy job getting the Bolivia off at Charlotte.

Business at Goble & MacFarlane's drydock, is booming. Beside the barges the steamer Scotia, which brought a load o barley, will be docked and will receive a new shoe and wheel.

The many friends of Dr. Lawrence Reynolds, the marine hospital surgeon will be pained to hear of his death, which occurred here on the 25 inst. A record of his life would fill a volume. He was a surgeon during the rebellion. The grand army posts here, will turn out and add their mite to the tribute paid to his memory.

The tug Charlie Ferris, with the wrecking scow which has been down to the wreck of the schooner Comanche, at Point Peninsula, arrived here April 26, with the schooner. Wrecking master W. D. Allen says she is not damaged as much as was supposed. She will go on Goble & MacFarlane's drydock, as soon as the Scotia is off, for repairs.

LEWIS.

THE STRAITS.

The steamer Henry Chisholm, towing the H. J. Webb, passed here at 8.30 Sunday morning, being the first boat to enter the Straits this season. She was closely followed by the Wallula, C. Tower, Kasota, James Pickands, and J. W. Westcott. Just after passing here the Kasota took the lead and held it all the way to the Shank. At 6 P. M. the Kasota, Wallula, Tower, and Pickands were out of sight around the Shank, and the Chisholm was just rounding it. The Westcott was about three miles above McGulpin's and is apparently disabled, her engines not having worked any since 11 A. M. These boats encountered some very heavy fields of ice above here. Very often they would come to a full stop and be obliged to back up and go around. The propeller Champlain was the first through last season, April 23.

The steamer D. C. Whitney and consort Ashland passed up at 6 P. M. Captain July reports that they encountered no ice below to obstruct navigation. Above here it is all full, and some of the ice is white and very solid, this having drifted down from among the islands at the foot of the lake.

Advices from Bailey's Harbor, state that the ice is all loose and moving in Green Bay.

OGDENSBURG.

George Hall & Co., have sold the steamer Lotus which run on the Alexandria Bay route last summer, to Charles Byrnes, of Escanaba, Mich., where she will be taken upon the opening of the Welland canal to run on a fourteen mile route in the passenger and towing trade.

HISTORY OF LAKE NAVIGATION.

Written for the Marine Record.

CHAPTER XCIII.

On the raising of the capsized schooner Jamaica, which occurred in June, the body of the cook, Elizabeth Headington, was found in a standing position in the cabin and unsupported by anything on either side. Her arms were extended, her hands clenched and a look of terrible agony on her face.

A sailor on the schooner Minnie Slawson, named William Barry, while furling the maintopsail, was lost overboard and drowned east of Summer island. He was about 36 years of age, and left a family at Station island.

The steamer Manitoba, a new and splendid side-wheeler, plying between Collingwood and the north shore of Lake Superor, got aground in a dense fog on the 19th of July, but was pulled off by the steamer Cumberland, when it was found she had sprung aleak, and she had to be beached to prevent her sinking in deep water. She sunk in twelve feet of water, and the tug Quayle was sent to her relief. Her passengers and crew were saved.

On the 21st of July the schooner D. L. Couch sprung aleak within fifteen miles of Long Point and sunk. The crew were rescued by Captain O. Myrick, of the schooner Citizen.

Captain Paul Pelkey, of the tug Ida Stevens, on the 21st of July discovered the wreck of the Westmoreland, sunk in the winter of 1855, near Manitou island. The circumstances of her loss will be remembered by some of the older lake men. Being extremely cold weather, early in December she foundered with the accumula ion of ice in twelve fathoms of water. Captain Pelkey was mate on the Westmoreland at the time and one of the survivors. On reaching shore he took bearings and followed the beach via Mackinac to civilization. She was a new boat and measured 800 tons.

On the morning of the 18th of July Thos. Holbrook, of the firm of Holbrook & Co., Batavia, Ill., fell from the deck of the propeller Fountain City and was drowned.

John Bassett, of the steamer Chicora, fell overboard and was drowned in Georgian Bay on the 26th of July.

The schooner Black Duck foundered in deep water in August. The crew were saved.

The schooner Fearless, Captain Speed, sprung aleak off Whitefish Point, waterlogged and capsized despite every effort at the pumps. The crew took to the small boats, and were picked up by the brig Commerce and carried to Manitowoc.

The tug Danforth was burned at the dock, Duluth, August 6. She was owned by D. Schutte and was valued at $8,500. Her damage was $3,500.

Captain Paul Pelkey died in August, after having discovered the wreck of the Westmoreland. He was an able navigator and highly respected. He was a native American, half Indian blood.

On the 14th the schooner Day Spring was struck by lightning off Ahnapee and a sailor named Tobiassen instantly killed. The mate of the vessel, Mueller, was badly injured.

A sailor named Charles Hill, of Racine, fell into the hold of the schooner Midnight, August 16 and died shortly after. He left a wife and eight children.

Philip Nolan, mate on the barge Susan Ward, fell overboard August 17 and was drowned.

The propeller Bertachv, Captain Vance, took fire at the pier at Depere, August 25 and was partially consumed. By the efforts of the crew the loss was confined to $8,000. She was repaired at Manitowoc.

While some blasting was being done in Detroit river August 25, the scow Snowbird, which was lying near by, was lifted by the explosion and damaged so that she sunk. She was raised and repaired.

By the foundering of the schooner Louis Meeker on Lake Huron, August 29, the captain and four of the crew lost their lives. The Meeker was a new vessel and had a cargo of 22,000 bushels of wheat. She was owned by Captain Lindgrier, and was insured.

The schooner Erie sunk at her anchor off Marblehead during the gale August 30. She was owned and commanded by Captain John L. Andre. The crew escaped in the small boat. The Erie was one of the old timers, having been built in 1833 at Buffalo. For many years she served as a revenue cutter, and was afterward taken to Lake Michigan and run in the lumber trade.

The schooner Orion was one of the victims of the storm of the first of September on Lake Erie. She was built in 1853 and was owned by E. Zealand, of Hamilton, Ont.

The small tug Ada was burned at her dock on the east side of Grand island, on September 5. She had been used in light work on Niagara river. Loss about $2,000. She was rebuilt.

Two sailors, named John Warwick and Malco'm McKay, were lost overboard from the schooner Tecumseh on the 7th and both drowned. They fell from the jibboom and could not be picked up. Both resided in Goderich and were married.

On the 24th September a convention of steamboat owners met at the parlors of the Kennard house, Cleveland, in pursuance to an invitation issued by Cleveland vessel owners, and in conformity with a meeting of the executive committee of the steamboat men's national convention; held at Washington on the 11th of June. Thomas Sherlock, of Cincinnati, chairman of the committee called the meeting to order and was afterward chosen president, John T. Whiting of Detroit and David I. Smith of New York, vice presidents; B. S. Osbon, publisher of the Nautical Gazette, New York, corresponding secretary, W. L James, of Pennsylvania, recording secretary. The convention met for the purpose of taking action to right certain abuses under which steamboat men were laboring and resolutions were passed condemning the action of the supervising inspectors at their annual meetings in foisting upon steamboat men certain patents and so called improvements. Captain J. T. Whiting produced evidence wherein it was shown that steamers had been arrested for not carrying Ashcroft's register. Mr. Whiting held that the courts were not inclined to impose these burdens on the shipping of the country and that the act of February 28, 1871, recommended by the supervising inspectors, should be repealed.

Captain B. S. Osbon believed that there was the most inexcusable inefficiency and ignorance in the corps of inspectors. He had a high regard for Mr. Nimmo chief of the bureau of steam navigation, but thought that the chief had no knowledge of the duties devolving upon him, and that if the executive committee of the convention should go to Washington, make a plain statement of the facts in the matter, they could do much toward having the grievances raised. These views were adopted by resolution and a committee appointed. [It seems in these days that the action of the convention had the effect hoped for, as many of the burdens were lifted from the steamboat interests.

VESSELOWNERS AND CAPTAINS

will please ☞ *not overlook* the *following statement* ☜ that the undersigned makes a speciality of supplying vessels with ☞ *Comfortables, Blankets, Table-linens, Towels, Sheets, Pillowcases Napkins, etc.*, and having seamstresses in our steady employment, we are enabled to furnish any necessary equipment for bedding ☞ *at the shortest notice.* ☜ Also we, *Kohn & Company*, 213 Detroit, near corner Pearl street, Cleveland, O., are the ☞ only *Retailers* in this city, who manufacture every one of our many kinds of *Flannel Shirts, Waterproof, Shirts, Overalls, Jean Pants, etc.*, we have in stock ready made or make them ☞ *to order* ☜ without extra charges above the prices of our *ready made* above named garments. Call and satisfy yourselves is all we ask. Kohn & Company, 213 Detroit street near corner Pearl street.

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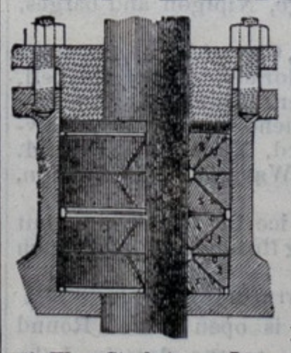

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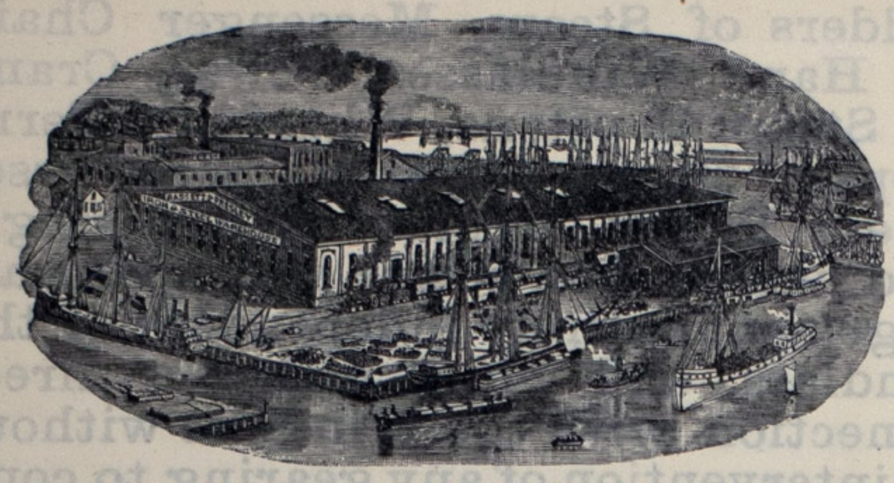

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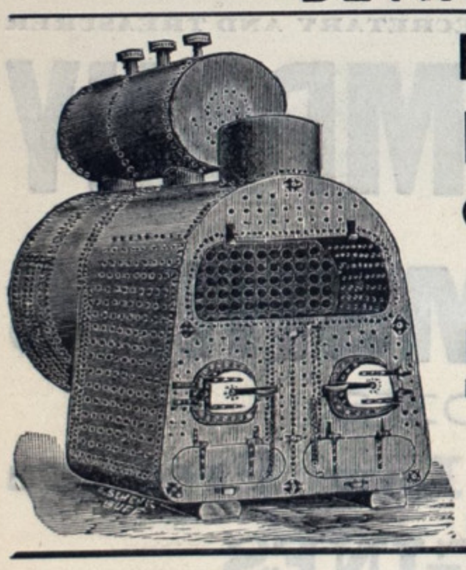

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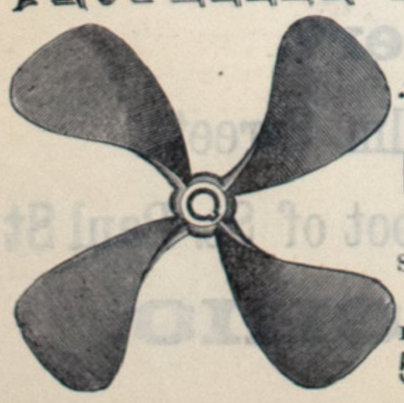

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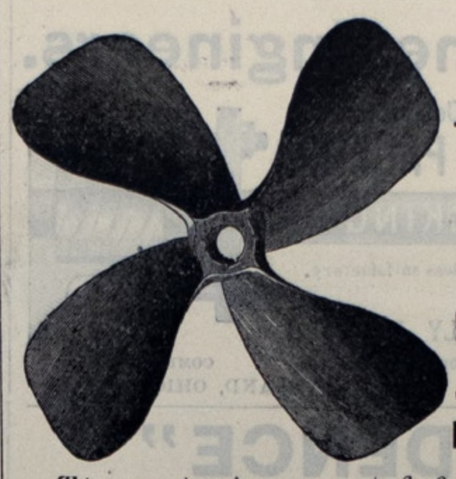

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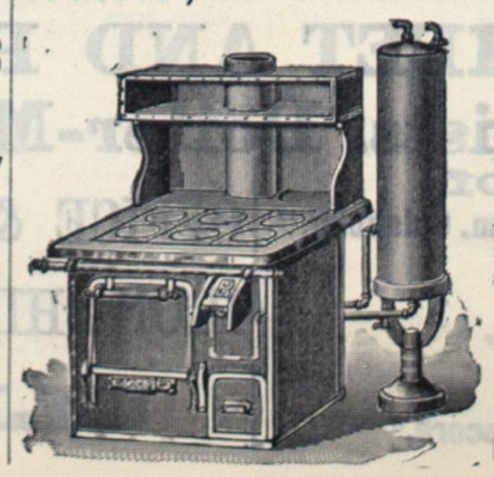

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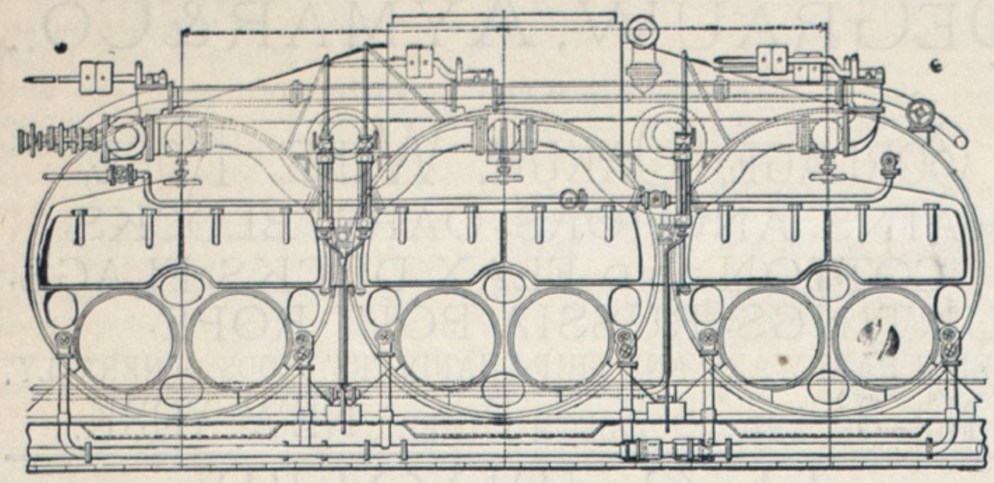

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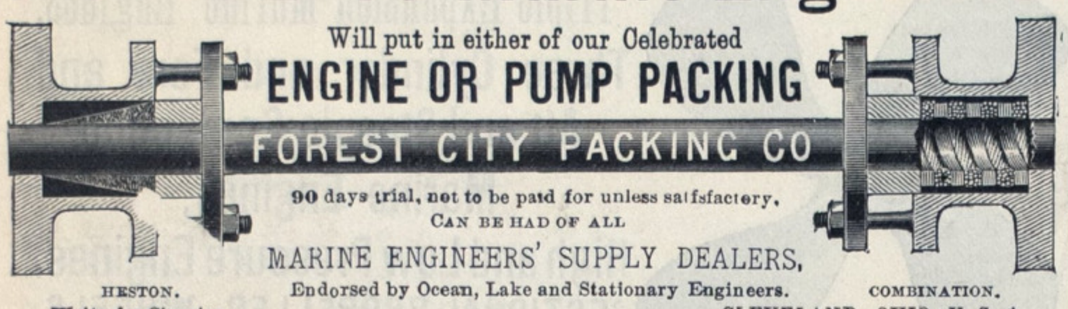

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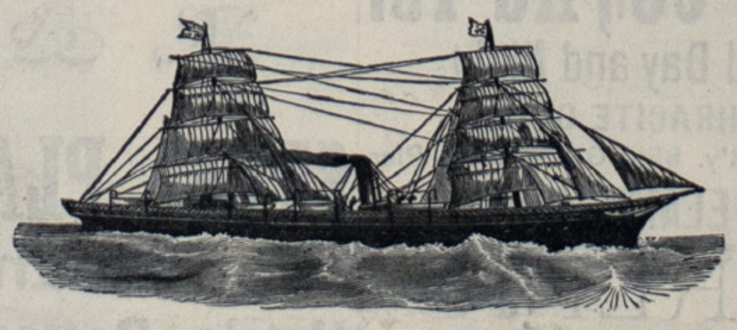

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